RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/689,992

Input Set : A:\07917-105001.txt
Output Set: N:\CRF3\07032001\I689992.raw

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   4 <110> APPLICANT: Mello, Craig C.
   5         Tabara, Hiroaki
   6         Grishok, Alla
   7         Fire, Andrew
   9 <120> TITLE OF INVENTION: RNA INTERFERENCE PATHWAY GENES AS TOOLS FOR TARGETED GENETIC
INTERFERENCE
  11 <130> FILE REFERENCE: 07917-105001
  13 <140> CURRENT APPLICATION NUMBER: US 09/689,992
C--> 14 <141> CURRENT FILING DATE: 2001-06-21
  16 <150> PRIOR APPLICATION NUMBER: US 60/193,218
  17 <151> PRIOR FILING DATE: 2000-03-30
  19 <150> PRIOR APPLICATION NUMBER: US 60/159,776
  20 <151> PRIOR FILING DATE: 1999-10-15
  22 <160> NUMBER OF SEQ ID NOS: 15
  24 <170> SOFTWARE: FastSEQ for Windows Version 4.0
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  27 <211> LENGTH: 3719
  28 <212> TYPE: DNA
  29 <213> ORGANISM: Caenorhabditis elegans
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  35 tatgagaaga aagtacttct tttggtaaat tggttcaagt tctccagcaa aatttacgat   240
  36 cgggaatact acgagtatga agtgaaaatg acaaaggaag tattgaatag aaaaccagga   300
  37 aaacctttcc caaaaaagac agaaattcca atgtaagtgc ttgtaaatta gtcaaaacta   360
  38 attttatttt tcagtcccga tcgtgcaaaa ctcttctggc aacatcttcg gcatgagaag   420
  39 aagcagacag attttattct cgaagactat gtttttgatg aaaaggacac tgtttatagt   480
  40 gtttgtcgac tgaacactgt cacatcaaaa atgctggttt cggagaaagt agtaaaaaag   540
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  45 ttaaagtgtg agttgcaata ataataataa taatcacctc aactcattta tatattttaa   840
  46 gacaattcgc gaaaaatttt gtgtacgata ataattcaat tctgcgagtt cctgaatcgt   900
  47 ttcacgatcc aaacagattc gaacaatcat tagaagtagc accaagaatc gaagcatggt   960
  48 ttggaattta cattggaatc aaagaattgt tcgatggtga acctgtgctc aattttgcaa  1020
  49 gtaagtttga gaaactgcga taaaaaatca tgtgatttt gttgaagttg tcgataaact   1080
  50 attctacaat gcaccgaaaa tgtctcttct ggattatctt ctcctaattg tcgaccccca  1140
  51 gtcgtgtaac gatgatgtac gaaaagatct taaaacaaaa ctgatggcgg gaaaaatgac  1200
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  53 cgcagaagtt tgggataacg aaatgttagt ttaaattatt caaacaatta atatacaaat  1320
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  56 atactacatt gttcaaaatc tatgaggaaa acaaaaagtt cattgagttt ccccacctac  1500
  57 cactagtcaa agttaaaagt ggagcaaaag aatacgctgt accaatggaa catcttgaag  1560
  58 ttcatgagaa gccacaaaga tacaagaatc gaattgatct ggtgatgcaa gacaagtttc  1620
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 62 atgaacaaat taaaatgaca ccagtgattc gtggatttca agaaaaacaa ttgaatgtgg    1860
 63 ttcccgaaaa agaactttgc tgtgctgttt ttgtagtcaa cgaaacagcg ggaaatccat    1920
 64 gcttagaaga gaacgacgtt gtgtaagtgt tttctacgta gattattccg aaatattttc    1980
 65 agtaagttct acaccgaact aattggtggt tgcaagttcc gtggaatacg aattggtgcc    2040
 66 aatgaaaaca gaggagcgca atctattatg tacgacgcga cgaaaaatga atatgccgta    2100
 67 agtttcagaa aattgaaagt ttttaaatat catatttaca gttctacaaa aattgtacac    2160
 68 taaataccgg aatcggtaga tttgaaatag ccgcaacaga agcgaagaat atgtttgaac    2220
 69 gtcttcccga taaagaacaa aaagtcttaa tgttcattat catttccaaa cgacaactga    2280
 70 atgcttacgg ttttgtgaaa cattattgcg atcacaccat cggtgtagct aatcagcata    2340
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 72 gaattttcta tcaaattgca ttgaaaatca acgcgaaatt aggaggtatt aaccaggagc    2460
 73 ttgactggtc agaaattgca gaaatatcac cagaagaaaa agaaagacgg aaaacaatgc    2520
 74 cattaactat gtatgttgga attgatgtaa ctcatccaac ctcctacagt ggaattgatt    2580
 75 attctatagc ggctgtagta gcgagtatca atccaggtgg aactatctat cgaaatatga    2640
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 79 aatcgagcac cagcgcatat tgtagtctat cgagacggag ttagcgattc ggagatgcta    2880
 80 cgtgttagtc atgatgagct tcgatcttta aaaagcgaag taaaacaatt catgtcggaa    2940
 81 cgggatggag aagatccaga gccgaagtac acgttcattg tgattcagaa aagacacaat    3000
 82 acacgattgc ttcgaagaat ggaaaaagat aagccagtgg tcaataaaga tcttactcct    3060
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 86 ggacattaca ctgttatgta tgacgataaa ggaatgagcc aagatgaagt ctatgtaagc    3300
 87 gttttgaata gcagttagcg attttaggat tttgtaatcc gcatatagtt attataaaaa    3360
 88 aatgtttcag aaaatgacct acggacttgc ttttctctct gctagatgtc gaaaacccat    3420
 89 ctcgttgcct gttccggttc attatgctca tttatcatgt gaaaaagcga aagagcttta    3480
 90 tcgaacttac aaggaacatt acatcggtga ctatgcacag ccacggactc gacacgaaat    3540
 91 ggaacatttt ctccaaacta acgtgaagta ccctggaatg tcgttcgcat aacattttgc    3600
 92 aaaagtgtcg cccgtttcaa tcaaattttt caattgtaga tattgtactt actttttttt    3660
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 97 <212> TYPE: DNA
 98 <213> ORGANISM: Caenorhabditis elegans
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103 aattctatga gaagaaagta cttcttttgg taaattggtt caagttctcc agcaaaattt     180
104 acgatcggga atactacgag tatgaagtga aaatgacaaa ggaagtattg aatagaaaac     240
105 caggaaaacc tttcccaaaa aagacagaaa ttccaattcc cgatcgtgca aaactcttct     300
106 ggcaacatct tcggcatgag aagaagcaga cagattttat tctcgaagac tatgtttttg     360
107 atgaaaagga cactgtttat agtgtttgtc gactgaacac tgtcacatca aaaatgctgg     420
108 tttcggagaa agtagtaaaa aaggattcgg agaaaaaaga tgaaaggat ttggagaaaa     480
109 aaatcttata cacaatgata cttacctatc gtaaaaaatt tcacctgaac tttagtcgag     540
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RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/689,992

DATE: 07/05/2001
TIME: 11:13:17

Input Set : **A:\07917-105001.txt**
Output Set: **N:\CRF3\07032001\I689992.raw**

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111 cccagaaagt tcgctacgcg ccttttgtga acgaggagat taaagtacaa ttcgcgaaaa
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113 gattcgaaca atcattagaa gtagcaccaa gaatcgaagc atggtttgga atttacattg      720
114 gaatcaaaga attgttcgat ggtgaacctg tgctcaattt tgcaattgtc gataaactat      780
115 tctacaatgc accgaaaatg tctcttctgg attatcttct cctaattgtc gacccccagt      840
116 cgtgtaacga tgatgtacga aaagatctta aaacaaaact gatggcggga aaaatgacaa      900
117 tcagacaagc cgcgcggcca agaattcgac aattattgga aaatttgaag ctgaaatgcg      960
118 cagaagtttg ggataacgaa atgtcgagat tgacagaacg acatctgaca tttctagatt     1020
119 tgtgcgagga aaactctctt gtttataaag tcactggtaa atcggacaga ggaagaaatg     1080
120 caaaaaagta cgatactaca ttgttcaaaa tctatgagga aaacaaaaag ttcattgagt     1140
121 ttccccacct accactagtc aaagttaaaa gtggagcaaa agaatacgct gtaccaatgg     1200
122 aacatcttga agttcatgag aagccacaaa gatacaagaa tcgaattgat ctggtgatgc     1260
123 aagacaagtt tctaaagcga gctacacgaa aacctcacga ctacaaagaa aataccctaa     1320
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127 aattgaatgt ggttcccgaa aaagaacttt gctgtgctgt ttttgtagtc aacgaaacag     1560
128 cgggaaatcc atgcttagaa gagaacgacg ttgttaagtt ctacaccgaa ctaattggtg     1620
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133 ttgtgaaaca ttattgcgat cacaccatcg gtgtagctaa tcagcatatt acttctgaaa     1920
134 cagtcacaaa agctttggca tcactaaggc acgagaaagg atcaaaacga attttctatc     1980
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143 atccagagcc gaagtacacg ttcattgtga ttcagaaaag acacaataca cgattgcttc     2520
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152 accctggaat gtcgttcgca taacattttg caaaagtgtc gcccgtttca atcaaatttt     3060
153 tcaattgtag atattgtact tacttttttt taaagcccgg tttcaaaaat tcattccatg     3120
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157 <211> LENGTH: 1020
158 <212> TYPE: PRT
159 <213> ORGANISM: Caenorhabditis elegans
161 <400> SEQUENCE: 3
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165            20                  25                      30
166 Gly Lys Phe Tyr Glu Lys Lys Val Leu Leu Leu Val Asn Trp Phe Lys
167        35                  40                      45
168 Phe Ser Ser Lys Ile Tyr Asp Arg Glu Tyr Tyr Glu Tyr Glu Val Lys
169     50                  55                      60
170 Met Thr Lys Glu Val Leu Asn Arg Lys Pro Gly Lys Pro Phe Pro Lys
171  65              70                  75                      80
172 Lys Thr Glu Ile Pro Ile Pro Asp Arg Ala Lys Leu Phe Trp Gln His
173                85                  90                      95
174 Leu Arg His Glu Lys Lys Gln Thr Asp Phe Ile Leu Glu Asp Tyr Val
175            100                 105                     110
176 Phe Asp Glu Lys Asp Thr Val Tyr Ser Val Cys Arg Leu Asn Thr Val
177            115                 120                     125
178 Thr Ser Lys Met Leu Val Ser Glu Lys Val Val Lys Lys Asp Ser Glu
179        130                 135                     140
180 Lys Lys Asp Glu Lys Asp Leu Glu Lys Lys Ile Leu Tyr Thr Met Ile
181 145                 150                 155                     160
182 Leu Thr Tyr Arg Lys Lys Phe His Leu Asn Phe Ser Arg Glu Asn Pro
183                165                 170                     175
184 Glu Lys Asp Glu Glu Ala Asn Arg Ser Tyr Lys Phe Leu Lys Asn Val
185            180                 185                     190
186 Met Thr Gln Lys Val Arg Tyr Ala Pro Phe Val Asn Glu Glu Ile Lys
187        195                 200                     205
188 Val Gln Phe Ala Lys Asn Phe Val Tyr Asp Asn Asn Ser Ile Leu Arg
189     210                 215                 220
190 Val Pro Glu Ser Phe His Asp Pro Asn Arg Phe Glu Gln Ser Leu Glu
191 225                 230                 235                     240
192 Val Ala Pro Arg Ile Glu Ala Trp Phe Gly Ile Tyr Ile Gly Ile Lys
193                245                 250                     255
194 Glu Leu Phe Asp Gly Glu Pro Val Leu Asn Phe Ala Ile Val Asp Lys
195            260                 265                     270
196 Leu Phe Tyr Asn Ala Pro Lys Met Ser Leu Leu Asp Tyr Leu Leu Leu
197        275                 280                     285
198 Ile Val Asp Pro Gln Ser Cys Asn Asp Asp Val Arg Lys Asp Leu Lys
199     290                 295                 300
200 Thr Lys Leu Met Ala Gly Lys Met Thr Ile Arg Gln Ala Ala Arg Pro
201 305                 310                 315                     320
202 Arg Ile Arg Gln Leu Leu Glu Asn Leu Lys Leu Lys Cys Ala Glu Val
203                325                 330                     335
204 Trp Asp Asn Glu Met Ser Arg Leu Thr Glu Arg His Leu Thr Phe Leu
205            340                 345                     350
206 Asp Leu Cys Glu Glu Asn Ser Leu Val Tyr Lys Val Thr Gly Lys Ser
207        355                 360                     365
208 Asp Arg Gly Arg Asn Ala Lys Lys Tyr Asp Thr Thr Leu Phe Lys Ile
209     370                 375                 380
210 Tyr Glu Glu Asn Lys Lys Phe Ile Glu Phe Pro His Leu Pro Leu Val
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RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/689,992

DATE: 07/05/2001
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Input Set : A:\07917-105001.txt
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211 385
212 Lys Val Lys Ser Gly  390  Ala Lys Glu Tyr Ala  395  Val Pro Met Glu His  400
213                                                                           Leu
214 Glu Val His Glu  405  Lys Pro Gln Arg Tyr  410  Lys Asn Arg Ile Asp  415  Leu Val
215             420
216 Met Gln Asp Lys Phe Leu Lys Arg  425  Ala Thr Arg Lys Pro  430  His Asp Tyr
217         435                           440                        445
218 Lys Glu Asn Thr Leu Lys Met Leu Lys Glu Leu Asp  Phe Ser Ser Glu
219     450                           455                        460
220 Glu Leu Asn Phe Val Glu Arg Phe Gly Leu Cys Ser Lys Leu Gln Met
221 465                       470                  475                    480
222 Ile Glu Cys Pro Gly Lys Val Leu Lys Glu Pro Met Leu Val Asn Ser
223             485                       490                        495
224 Val Asn Glu Gln Ile Lys Met Thr Pro Val Ile Arg Gly Phe Gln Glu
225             500                       505                  510
226 Lys Gln Leu Asn Val Val Pro Glu Lys Glu Leu Cys Cys Ala Val Phe
227     515                       520                        525
229 Val Val Asn Glu Thr Ala Gly Asn Pro Cys Leu Glu Glu Asn Asp Val
230     530                       535                        540
231 Val Lys Phe Tyr Thr Glu Leu Ile Gly Gly Cys Lys Phe Arg Gly Ile
232 545                       550                  555                    560
233 Arg Ile Gly Ala Asn Glu Asn Arg Gly Ala Gln Ser Ile Met Tyr Asp
234             565                       570                        575
235 Ala Thr Lys Asn Glu Tyr Ala Phe Tyr Lys Asn Cys Thr Leu Asn Thr
236             580                       585                        590
237 Gly Ile Gly Arg Phe Glu Ile Ala Ala Thr Glu Ala Lys Asn Met Phe
238     595                       600                        605
239 Glu Arg Leu Pro Asp Lys Glu Gln Lys Val Leu Met Phe Ile Ile Ile
240     610                       615                  620
241 Ser Lys Arg Gln Leu Asn Ala Tyr Gly Phe Val Lys His Tyr Cys Asp
242 625                       630                  635                    640
243 His Thr Ile Gly Val Ala Asn Gln His Ile Thr Ser Glu Thr Val Thr
244             645                       650                        655
245 Lys Ala Leu Ala Ser Leu Arg His Glu Lys Gly Ser Lys Arg Ile Phe
246             660                       665                  670
247 Tyr Gln Ile Ala Leu Lys Ile Asn Ala Lys Leu Gly Gly Ile Asn Gln
248     675                       680                        685
249 Glu Leu Asp Trp Ser Glu Ile Ala Glu Ile Ser Pro Glu Glu Lys Glu
250     690                       695                        700
251 Arg Arg Lys Thr Met Pro Leu Thr Met Tyr Val Gly Ile Asp Val Thr
252 705                       710                  715                    720
253 His Pro Thr Ser Tyr Ser Gly Ile Asp Tyr Ser Ile Ala Ala Val Val
254             725                       730                        735
255 Ala Ser Ile Asn Pro Gly Gly Thr Ile Tyr Arg Asn Met Ile Val Thr
256             740                       745                        750
257 Gln Glu Glu Cys Arg Pro Gly Glu Arg Ala Val Ala His Gly Arg Glu
258         755                       760                        765
259 Arg Thr Asp Ile Leu Glu Ala Lys Phe Val Lys Leu Leu Arg Glu Phe
260     770                       775                        780
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Please Note: —— FYI!

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220> to
<223> fields of each sequence which presents at least one n or Xaa.

file://C:\CRF3\Outhold\VsrI689992.htm

7/5/01

VERIFICATION SUMMARY
PATENT APPLICATION: US/09/689,992

DATE: 07/05/2001
TIME: 11:13:18

Input Set : **A:\07917-105001.txt**
Output Set: **N:\CRF3\07032001\I689992.raw**

L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:381 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5
L:383 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5
L:866 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12
L:868 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12
L:923 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12
L:925 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12

file://C:\CRF3\Outhold\VsrI689992.htm

7/5/01